MacWise™
Version 11

User's Manual
For Mac OS X
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You can use Command F to find what you are looking for in this document.

Version History is available at http://www.macwise.com/MacWiseXVersions.html

For OS X Only

Introduction

MacWise version 11 is a universal application that runs natively on Intel Macs and PowerPC Macs.

Terminal Emulation

MacWise emulates ADDS Viewpoint, Wyse 50, Wyse 60, Wyse 370, Televideo TV 925, DEC VT100, VT220 and Prism terminals. Supports ANSI color. Esprit III color is also supported in Wyse 370 mode.

MacWise allows a Macintosh to be used as a terminal -- connected to a host computer directly, by modem, or over the Internet. The emulators support video attributes such as dim, reverse, underline, 132-column modes, protected fields and graphic characters sent from the host computer, as well as enhanced Viewpoint mode. Features include phone list and dialer for modems, on-screen programmable function keys, connection scripts and more.

Connectivity

1. Built in Modem
2. Telnet / TCP/IP
3. SSH Secure Shell
4. Serial ports via USB to Serial adaptor .
5. Also communicates directly with the Mac unix shell

Telnet

Telnet settings are under the Connection Menu.
Select "Telnet" to enable telnet.
Select "Telnet Connection..." to enter your Host IP address, port number and terminal type.

The option for "**Verbose Login**" lets you see all of the commands during the login process.
It is useful for troubleshooting login problems.

Use TC Shell to Log in - is an option that gives you a unix prompt after your connection closes.
This is handy for system administrators but not so good for average users. If you are a system administrator and do not want your users to be able to type commands into the unix shell, then do not enable this option. However,

some host computers will require that this option is enabled and will not see the Terminal Type you have entered if it is unchecked.
NOTE: When you uncheck this item, it also un-checks Unix Raw Mode. You can turn Unix Raw Mode back on, but some hosts will not let you log in with this combination.

Unix Raw Mode - This is normally checked. If you get a login message from the host but cannot type anything, uncheck this option. If you get double characters when you type, uncheck this option.

You can enter **telnet options** also. Don't enter anything unless you know what you are doing.
Click on options help to see a list of the commands you can use.

MacWise uses the Mac OS X unix shell to get a telnet connection.
Basically, if you already have a connection to your host from your Mac via ethernet or the Internet, you should not need to change any other Mac settings to get a telnet login.
Just select Open Connection from the Connection menu to get a login to the telnet host.

If you cannot get a connection, take a look at your settings in the Network System Preferences.
Click on the TCP/IP tab to check your settings.

Saving Settings for More than one Host Computer Connection
You can save your settings (under the File menu). This is valuable if you connect to multiple host computers. Then when you want to open a settings file you can select Open Settings from the File Menu or you can double click on a settings file from the desktop.
HINT: Save all of your settings files in one folder. Save one settings file for each host you connect to. Then you can easily choose from the list of hosts to connect to and just double click on the one you want. Each settings file you double click on will open a new window with all of the associated settings for that host.

Terminal Types
When you login to the Mac Unix Shell, MacWise will set your unix TERM type based upon the emulation you have selected under the Emulate Menu. When you login with telnet or secure shell, you can enter the TERM type or optionally leave it blank. If you leave the TERM type blank, MacWise will use the following default term types:

Emulation	TERM type
Prism	prism7
TV925	tvi925
VT100	vt100
VT220	vt220
Viewpoint	viewpoint
Wyse 50	wy50
Wyse 60	wy60
Wyse 370	wy370

When you login to a host with telnet or secure shell, it is important to use the correct TERM type.
If the host system administrator wants you to use a special name for you terminal, then use that name. Otherwise just leave it blank and MacWise will use the standard types above.

SSH Secure Shell

Secure Shell settings are under the Connection Menu.
Select "Secure Shell" to enable secure shell logins.
Select "Secure Shell Connection..." to enter your Host IP address (or name), user name, port number and terminal type.

The option for "Verbose Login" lets you see all of the commands during the login process.
It is useful for troubleshooting login problems.

Unix Raw Mode - This is normally checked. If you get a login message from the host but cannot type anything, uncheck this option. If you get double characters when you type, uncheck this option.

MacWise uses the Mac OS X unix shell to get a secure shell connection.
Basically, if you already have a connection to your host from your Mac via ethernet or the Internet, you should not need to change any other Mac settings to get a secure shell login.
Just select Open Connection from the Connection menu to get a login to the secure host.
Port 22 is the default port for secure logins.

Mac OS X negotiates with the host computer for the best possible secure connection and protocol.
If you want to add your own settings, you can enter options to change the way the connection is made.
Click on the Options Help button to see what options you can use (in the Secure Shell Connection window).

Login to the Mac Unix Shell

You can log directly into your Mac unix shell.
You have the power to control many aspects of your Mac at this level.
Proceed with caution.

Prompt for Login name using /usr/bin/login - will give you a login prompt when you open the connection. You would enter a valid user name and password for a user on this Mac.

Login using /bin/tcsh (the tc shell) - This is the default and will login to your account.

Use this path for Login - Lets you enter your own path.

Unix Raw Mode - This is normally checked. If you get a login message from the Mac unix shell but cannot type anything, uncheck this option. If you get double characters when you type, uncheck this option.
This is normally checked when logging in using bin/tcsh (the unix shell). Uncheck it if using bin/bash or prompt for login.

Serial Connections

To set up your serial connection, simply pull down the Settings Menu and select your Serial port, baud rate etc. Serial ports are automatically detected. New ports will show up in the Serial Port Menu under Settings when you add more ports. Mac OS X only supports the built in modem and USB serial ports. Therefore, MacWise cannot work with older Macs that have built in serial ports. If you have such an older Mac, you will need to get a USB to Serial adaptor to make a direct serial connection to your host.

Direct Serial Connection
MacWise has been tested with Keyspan USB to Serial adaptors.
www.keyspan.com

Built in Modem
Automatically supported by MacWise.
You may need to enter a Modem Initialization String to make your modem dial and connect to your host.
Consult your user's manual for the modem that came with your Mac.
You can try one of the preset init strings. One of them will probably work.

Keyspan USB to Serial Adaptors and drivers
You will need to install the OS X drivers for Keyspan if you are using one of these devices.
They are available at
http://www.keyspan.com/products/usb/usa28x/downloads/#MacXLatest
(The OS 9 drivers will not work with MacWise version 10)

Preferences

Remember Window Positions - MacWise will remember the size and position of your MacWise window when you close the window or quit and restart MacWise.

Limit Screen Page Depth to 24 Lines - Some host programs require the screen to scroll when the cursor is below the 24th line. If you are experiencing improper scrolling, then enable this option.
Disable this option if you have a large monitor and want full page scrolling.
Also, See "Previous Page Options" under the Edit menu for scrolling options.

Warn User When Option - C Will Close the Connection - If the user presses Option - C on the keyboard, it will warn them that the connection is about to close.

Xymox Wyse 370 Mode - This is specifically for users of host software by Xymox, AKA Metropolis. It enables special Option Keys. Do not enable this option unless you are connecting to one of these hosts.

Use Keypad for Wyse 60 Edit Keys - This changes the configuration of the 10-key pad on your keyboard. When enabled, the keys are as follows:
The top row of the keypad on the Mac has the same function as a Wyse 60 terminal...
Clear = / * becomes Ins Char, Del Char, Clr Line, Repl
With the shift key held down:
Clear = / * becomes Ins Line, Del Line, Clr Scrn, Ins

Enable Alternate Keypad for VT Emulation - This changes the configuration of the 10-key pad on your keyboard for VT100 and VT220 Emulation.
When enabled, the keys are as follows:
The top row of the keypad on the Mac becomes the PF keys...
Clear = / * becomes PF1, PF2, PF3, PF4
NOTE: Alternate Keypad mode can still be enabled by the host computer when this option is not turned on. This option just forces it to always be on.

Clicking on a URL Link Works Only If It Is Underlined - If this is enabled, you can only click on an underlined web address URL or email address to launch your web browser or email program. If this option is disabled, It will launch the app even if the address is not underlined.
For host controlled browser launching that does not require clicking, see "Launching Your Browser and Sending Email Under Host Control"

Mouse Click Delimiter Character - Lets you specify the character that immediately follows your host menu item numbers (usually a period). This allows you to click on a menu item number without sending the period (or whatever character you specify). Also, If you click on any word on the screen, it will be sent to the host.

Send Carriage Return on Single Mouse Click - When you click on a menu number or word in the MacWise window, it will be sent to the host and a carriage return will be sent. Otherwise, just the number or word is sent and no carriage return.

Mouse Click Sends Column,row to host
Mouse click sends its cursor position to host preceded by ESC MOUSE
(CCC,RR where C=Column and R=Row)
Example:
Mouse is clicked on column 5 row 20
MacWise sends ESC MOUSE 005,20 CR
(where ESC = ASCII decimal 27 and CR = ASCII decimal 13)

Click on System Builder Menus - When communicating with host computers running System Builder software, this option lets you click on menu items within the window to select the menu item.

Disable Mouse Clicks - When you click the mouse on text in the MacWise window, nothing will happen if this option is enabled. However, you can still click on the fkey buttons at the bottom of the window.

More Preferences Information
Versions of MacWise prior to version 10.b3 stored the settings in the MacWise folder.
Settings are now stored in the user's Preference folder. This was done to accomodate multiple users on one Mac.
You can log in with a different user name and your settings can be personalized.
The MacWise folder is still shared among users. It is in the Applications folder.

To find the MacWise preferences folder:
Open your hard drive and click on the Home icon.

Open the Library folder
Open the Preferences folder
Open the Carnation Software Prefs folder
Open the MacWise Prefs folder
Now you will see at least four files that belong to MacWise:
defaults – stores most of your settings
fkeydefaults – stores your fkey settings
QuickDial – stores your QuickDial number for dialing with the modem.
Recorder – the default file to hold data you record with the capture menu.
Note: If you are upgrading from 10.b1 or 10.0b2, your settings will change due to the above changes.
You can get your old settings back by copying them out of the old MacWise folder into the new MacWise Prefs folder. However, that is not recommended if you have multiple users with different login names due to OS X permission settings.

Function Keys

Function keys can be used from the keyboard or by clicking on the fkey with the mouse.
When you change your emulation type, you will also need to change the function keys being used.
If you are using Wyse or Viewpoint emulation, you can select "Wyse Function Keys" or "Viewpoint Function Keys" under the Emulate Menu.
If you are using any other emulation, you will need to load the function key set. This can be done by selecting "**Function Key Sets**" from the Emulate Menu. Then just double-click on the set you want.

Function Key sets as of 3/11/03 are:
Mac unix fkeys – Common commands for the Mac unix shell
NWMLS Fkeys - for Northwest Multiple Listing Real Estate Services and VT100 emulation
Triad TV925 Fkeys - for Triad hosts and TV925 emulation
Triad Wyse Fkeys - for Triad hosts and Wyse emulation
Viewpoint Function Keys - Standard Viewpoint fkeys
Viewpoint Fkeys W/Page Up - has page up/down fkeys for Viewpoint emulation
VT100 Fkeys - Standard VT100 emulation fkeys
VT100 MLS Fkeys - Multiple Listing Service Fkeys for VT100
VT220 Fkeys - Standard VT220 Fkeys
VT220 MLS Fkeys - Multiple Listing service Fkeys for VT220
Xymox Fkeys - for Xymox, Xytec hosts and Wyse 370 emulation
Wyse Fkeys - Standard Wyse fkeys

More Fkey info...
Only F1 thru F10 are displayed. F11 thru 16 are only keyboard commands.
The exception is VT220 fkeys which display 20 fkeys.
If your fkeys do not work from the keyboard...
Try opening the Keyboard control panel and click on the Full Keyboard Access tab.
There are some options there that might be overriding the fkeys in MacWise.
iBooks require that you hold down the fn key and the fkey.

MacWise actually supported fkeys in the old days when there were no fkeys on Mac keyboards.
If you do an option 1 you will get F1, Option - Shift 1 for Shiffed F1 etc.
Numbered keys from 1 thru 10 on the top row are F1 thru F10
F11 thru F16 are the qwerty keys.

Also, You can Edit all of the fkeys by selecting Edit Fkeys from the Emulate Menu.
You can move the function of a fkey from one fkey to another...
For instance, you could edit F12 and click the Copy button. Then edit another fkey that is visible on the screen and click the Paste Key. That makes that fkey have the function of F12.

Printer Setup

If you select Printer Setup from the File Menu and enable "*Form Feed from Host = New Page*", page breaks will occur each time MacWise gets a form feed (Char 12) from the host.
You can also specify a word that will cause a page break whenever it appears at the beginning of a line.

You can select *Printer Textwrap On* which causes any long lines of text without

carriage returns to wrap around to the next line. This is normally not selected because it causes slower printing.

Select the printer font and size. The default is MacWiseFont 12 which should fit 80 columns and 66 rows on a standard letter-sized sheet of paper. If you use size 14 you will probably not be able to fit 80 columns on a letter-sized sheet. Only Monaco, Courier and MacWiseFont are provided since they are non-proportional fonts (which work best for proper column alignment).

When you select MacWiseFont, you will be able to print screens that contain graphic drawing characters and special international characters. Enabling this font actually selects a TrueType printer font.
If you have "Mac Set" enabled in International Characters, then MacWisePrinterFont is used.
If you have "IBM Set 2" enabled in International Characters, then MacWiseIBMPrinterFont is used.

Three fonts are installed automatically when MacWise is installed...
MacWiseFont is a bitmapped screen font.
MacWisePrinterFont and *MacWiseIBMPrinterFont* are TrueType printer fonts.
The fonts are installed in the Library / Fonts folder and must remain there.
(Hard Drive:Library:Fonts)
Versions prior to MacWise 10.9 installed the fonts in the user fonts folder.
If you need to re-install the fonts, you can run the MacWiseFont Installer located in the MacWise folder.

Print Screen as Graphic or Text...
When you select the *Text* option, you print using TrueType fonts.
The *Graphic* option prints the screen as a picture (screen shot).

"Ignore Printer Off Commands from Host" is only used for host computers that send a Printer Off command for each line of text. If you have this option enabled, you will need to manually toggle Printer On back off to start printing.

File Menu / Printer On
Turns the printer on. All data that comes to the screen will be printed. Printing does not start until Printer On is turned off. You can toggle Printer On and Off with COMMAND =. The host computer can also send commands to your Mac to toggle the printer on and off.

Window Settings

Window Transparency
Transparent windows let you see through the MacWise window to objects and text behind the window.
The default setting for window transparency is 2%. You can easily change this by selecting "Transparency" from the Window menu. Move the slider all the way to the left if you do not want transparent windows.
Move the slider to the right to set the transparency level.

Screen and Font Size
You can make the MacWise window and font larger by selecting "16-Point Font and Large Window" from the Window Menu.
For 132 column mode, you have two font size choices:
9-point font for 132 column mode or 12-point font for 132 column mode.

You can also select 24-Point Font and Large Window if your monitor resolution is 1280 wide or larger.

You can drag the lower right corner of the window to make the window taller.
If you are communicating directly with the Mac unix shell, the number of lines displayed will increase beyond the standard 24 lines (see that option in Preferences). If you are connected to another host computer, the number of lines displayed may or may not increase beyond 24 depending upon the setup of the host computer.

MacWiseFont
This font is required for MacWise to work properly in OS X.
It is installed during the install process automatically.
The font is installed in the Library / Fonts folder and must remain there.
(Hard Drive:Library:Fonts)

Versions prior to MacWise 10.9 installed the fonts in the user fonts folder.
If you need to re-install the font, you can run the MacWiseFont Installer located in the MacWise folder.

Multiple Session Windows
You can open up to 10 windows and connect to different host computers with each window. With a telnet or unix connection, you can open multiple sessions to the same host computer.
Open a new window with New Session Window under the File menu.
The window will open with the same settings as the previous window.
You can change the settings for that window and then switch between windows.
When using the serial port, you can only use one port at a time.

Settings Files
MacWise always remembers the settings of the currently opened window whenever you quit.
If you only connect to one host computer and do not use multiple session windows, then you do not need to save settings files.

If you need to use settings files, you can save your settings (under the File menu).
Then when you want to open a settings file you can select Open Settings from the File Menu or you can double click on a settings file from the desktop.
HINT: Save all of your settings files in one folder. Save one settings file for each host you connect to. Then you can easily choose from the list of hosts to connect to and just double click on the one you want. Each settings file you double click on will open a new window with all of the associated settings for that host.

Locking Settings Files
MacWise has the capability of locking the settings files to prevent the user from changing settings.
If you are a system administrator for a company, you may contact Carnation Software and request the procedure for locking the settings. Send your request to richlove@carnationsoftware.com

Launching Your Browser and Sending Email Under Host Control

When programmed into your host, you can select from a host menu item to launch your browser and go to a web site. Or launch your mail program and enter the recipient.
Please read the file in your MacWise folder, "Browser launching and email.rtf"

Data Transfers to and from the Host

Capture Files
You can capture data from the host by selecting "Make a New Capture File" from the Capture Menu.
Any data that comes to the screen will be captured until you toggle "Capture On" back off.

Record to Clipboard
You can capture data from the host by selecting "Record to Clipboard" Any data that comes to the screen will be captured until you toggle "Record to Clipboard" back off.

Host-To-Mac and Mac-To-Host File Transfers.
These are text file transfer options that were originally designed for PICK host computers.
They also work with Universe and Unidata hosts. Read the file called "PICK Data Transfers" for detailed instructions. The Mac-To-Host File Transfer is a simple text transfer and could be used with any host.

FTP File Transfers

FTP file transfer capability is built into the Mac Unix Shell.
You can send and receive files.

Open a New Session Window (under the File Menu)
This will be your ftp window.
Then...
1. Select Mac Unix Shell from the Connection Menu in MacWise.
2. Type ftp. You will get the ftp prompt.
3. To connect to your ftp host, type “ftp HostAddress” where HostAddress is the IP address of your host computer.
4. Type ls to see a list of files.

5. If you need to look inside of folders use the cd command (cd FolderName)
6. To receive a file from the host, use the get command (get FileName)
7. To send files to the host, use the put command (put FileName)

Note 1: If you need secure ftp transfers use sftp instead of ftp.
Note 2: The host will not allow a put if you are logged in anonymously
After you receive a file to your Mac, double click on the hard drive icon and you will see the file.

Kermit File Transfers

Select Kermit from the Connection Menu to enable Kermit file transfers.
Close the MacWise connection and re-open it. You will automatically log in using Kermit.
MacWise supports Kermit for telnet, ssh secure shell and Mac Unix Shell connections.

If the host sends a file to you using the Kermit file transfer protocol, the file will be transfered
to your kermit_transfers folder in your documents folder
(user/documents/kermit_transfers)

The nice thing about Kermit file transfers is that files are received automatically with no operator intervention.
Just look in your kermit_transfers folder for any files transferred.
NOTE: Files with the same name will be overwritten.
Kermit automatically names the file ft.txt if it is a text file.
Each time you do a transfer from the host to your Mac, you will need to move or rename the existing file if you do not want it to be overwritten with the new file transfer.

If you need to send a file to the host, you will need to connect using the Mac Unix Shell.
Then type ? to get help with the Kermit commands.
For instance if you wanted to send a file to the host using telnet from the Mac Unix Shell, you would tyoe:
telnet YourHostIPAddress (where YourHostIpAddress is the IP address of the host you are connecting to.
send YourFile (where YourFile is the name of a file in the kermit_transfers folder.

NOTE: If you get a Warning message during the file transfer stating that your terminal type is not recognized, you will need to change the terminal type that you have entered into the Telnet Connection... window under the Connection Menu. If Kermit does not recognize your terminal type, it will close your connection and exit into the unix shell the second time you do a kermit transfer.
Standard terminal types to use are:

Emulation	TERM type
Prism	prism7
TV925	tvi925
VT100	vt100
VT220	vt220
Viewpoint	viewpoint
Wyse 50	wy50
Wyse 60	wy60
Wyse 370	wy370

If you are using anything other than vt100, vt220 or wy50, you will need to install extra terminfo files on your Mac.
Please read the file called "terminfo installation instuctions.rtf" located in your MacWise folder.
Also, read the file, "Kermit File Transfers.rtf" in your MacWise folder.

For more information about Kermit
http://www.columbia.edu/kermit/ck80.html

Miscellaneous

Caps Lock
When Caps Lock is enabled under the Emulate Menu, all characters typed will be in upper case.
If the Caps Lock key is on while this is enabled, characters will be typed in lower case.

Clipboard
When you drag the mouse to lasso some characters, it copies to the clipboard.

If you hold the Command Key down, it copies text.
Hold the Option Key down and it copies it as a graphic.
If "Editable Screen Capture" is checked under the Capture Menu then the default will be to copy text to the clipboard (without needing to hold the Command Key down).

Open Connection and Close Connection
When the connection to the host is open, there will be a large dot in the title of the window.
For instance it might say "MacWise using modem •"
If the connection is closed it will look like this "MacWise using modem ≠"

You can open and close the connection from the Connection menu or just use the keyboard.
Option O to open the connection
Option C to close the connection

Connection Scripts
You can optionally use connection scripts to log into your host and enter the account and password automatically. When you open a connection, the Open Connection Script will be sent to the host. When you close the connection, the Close Connection Script will be sent.
Open Connection Script - When opening a connection, MacWise waits for a prompt from the host before sending the script. You can specify what the prompt is by entering it into the edit field called "Wait for text before sending Open Connection Script".
You enter the actual script that gets sent to the host by clicking on the button called "Edit the Open Connection Script". The edit window is the same format used for editing function keys.
Close Connection Script - When closing a connection, MacWise optionally sends a script to the host. It does not wait for a prompt from the host. You enter the actual script that gets sent to the host by clicking on the button called "Edit the Close Connection Script". The edit window is the same format used for editing function keys. If you do not want a script sent, then just make sure the script is blank when you edit it.

Answer Back

Some host computers require an answer back message when making a connection. This is normally done for security reasons. If the host does not receive the proper response when the connection is opened, the host will reject the connection.

You can program an answer back in MacWise by using Connection Scripts.
The connection script is sent to the host immediately after the connection is opened.
You will need to find out what answer back message your host expects and then enter it into the MacWise connection script.

1. Select Connection Scripts from the Connection Menu.
2. Put a check mark on "Enable Scripts"
3. Click on the "Edit the Open Connection Script" button.
4. Enter the answer back message. The message can be normal text and can also contain control and escape sequences. Normally, the message will end with a carriage return. Click the CR button for carriage return.

AppleScript

Please read the file "MacWise and AppleScript" in the "MacWise Sample AppleScripts" folder.

International Characters

International Characters are special characters that are used in different countries around the world. The default setting is US ASCII / Mac Set and is used in the United States.

An example of special characters: ∫ ø ¨å Æ £ ¿

If you have the Mac Set selected in combination with any of the foreign countries then the special characters are

7-bit characters and use the National Replacement Character Set (NRCS)

If you have the IBM Set 2 selected in combination with any of the countries, then the special characters are 8-bit characters and the country selected is ignored.
The exception to this is the French / Canadian setting which allows you to use 8-bit mode

Wyse Multinational is used for Wyse graphic drawing lines.
DEC Multinational is used for DEC graphic drawing lines in 8-bit mode with the IBM Set.

Option Keys for System Delimiter Characters

System Delimiter characters are used by programmers or system managers using the Host editor. You can type System Delimiter characters on your Macintosh keyboard by holding down the Option key and one of the following letter keys.

Option Key Delimiter	Character
B Start Buffer	[
S Subvalue Mark	\
V Value Mark	]
A Attribute Mark	^
G Segment Mark	_

Note: The value mark sends a Control [to the host. This can conflict with the telnet escape character and cause an escape back to TELNET command mode. To get around this problem, you can change the telnet escape character to something else in the Telnet Connection... item under the Connection Menu.

MacWise was written by Rich Love, Carnation Software, www.CarnationSoftware.com
using the FutureBasic programming language by Staz Software, www.FutureBasic.com
and compiled into C as a universal application with FBtoC, http://4toc.com/fb4/

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